



## METHOD AND DEVICE FOR DETERRING DOMESTIC CAT PREDATION

### ABSTRACT

The invention provides the use of illumination on a cat to interfere with predation. The enhanced detection of the cat aids birds and small mammals to elude capture.

### BACKGROUND OF THE INVENTION

The present method and device is concerned with cat predation and in particular alerting small wildlife to the presence of a cat.

In studies on cats and their effect on wildlife it has been estimated that up to 2 billion small mammals and birds are killed each year in the United States alone. A study completed in 1994 by University of Wisconsin-Madison graduate student John Coleman and professor Stanley Temple, estimates the annual wildlife killed each year in Wisconsin by domestic and free ranging cats to be 28 million song birds, 4 million cotton tail rabbits and 100 million small mammals.

Accordingly there exists a need to alert small mammals, reptiles and birds of a cat's presence.

Numerous illuminated pet collars, tags, pendants and other location devices have been used to identify people and pets in low visibility and darkness. Illuminated devices for

humans such as joggers, used on back packs, shoes, hats ,clothing and bicycles have been developed to protect or enhance the wearer. These devices are used to protect the person or animal wearing the device. Illuminated warning lights such as found on emergency vehicles, warning people to take notice of what's up ahead. The technologies used for power, switches, controls, sensors, reflectors, housings, attachment, illumination and motion detectors are as numerous if not more than the inventions them selves. Many light emitting accessories such as jewelry and novelty flashers have been developed and their means of workings are also numerous. All those skilled in the prior art are fully capable of changing details without departing in any way from the spirit of the present Method and invention.

Several types of warning devices have been developed such as (U.S. PAT.NO. 5952925) Secker in which he describes the use of sound waves to warn animals of the presence of a cat. This device is complex and expensive and would not avail itself to the general population who own cats,

Another invention such as (U.S.PAT. NO.6202599 B1) to Cutler describes a warning device for animals in which an inertial sensor responsive to rapid movement set off both sound waves and a blinking light as the cat launches at its prey. Being that a cat will only take a second to cover the strike distance in a launch action and the time it takes its prey to decipher an ambush and location the attack is coming from it seems this device would be mostly ineffective. Again the cost of this device is out of reach for most consumers.

## SUMARY OF THE INVENTION

The method and device of the present invention changes the use of the prior art by providing a simple method and device and who's purpose is not to protect the one wearing the device but protect others from the one wearing the device.

It is an object of the invention to provide a cat owner an affordable means of deterring their cat from killing wildlife other than just keeping the cat in doors.

It is another object of the invention to substantially reduce the numbers of birds and small animals killed by cats.

Another object of the invention is to provide a means of detecting a cat by the use of illumination that draws the attention of wildlife to the source of the illumination and continuously monitor the location of the cat.

Yet another object of the invention is warning wildlife to the presence of a cat before it reaches its strike zone.

Also another object of the invention is to provide flashing lights either intermittently or in sequence of which depicts movement thereby scarring the prey away.

And yet another object of the invention is to alert blue jays, robins and squirrels to the presence of a cat and have them warn the surrounding wildlife with their warning calls.

To provide an overall understanding of the invention, certain embodiments will now be described, including various applications for illuminating a cat.

To attain this, the present invention essentially relates to a device worn on a cat, comprised of a means of illumination and a means of powering said illumination. The illumination may be constant, intermittent or in sequence or a combination thereof. Intermittent illumination is preferred to reduce heat build up, reduce the power being drawn from the power source and studies have shown that blinking flashing light draw more attention than continuously lit illumination.

The means of illumination may be worn on, about or suspended from a collar or harness. As shown in the prior art for devices using blinking and or flashing light and in particular to the pet illuminators there exists a need to provide a greater source of power due to the cat wearing this device 24/7. Also the brightness of the illumination must be increased in order to see the device during the day.

## DESCRIPTION OF THE PREFERRED EMBODIMENT

For the purpose of promoting an understanding of the principals of the invention, reference will now be made to the embodiments illustrated in the drawings and specific language will be used to describe the same. It will never the less be understood that no limitation of the scope of the invention is thereby intended, such alterations and further modifications in the illustrated device and such further applications of the principals of the invention as illustrated therein being contemplated as would normally occur to one skilled in the art to which the invention relates.

In Fig.1 cat 49 has a collar 41 with attached device 30 as shown in Fig 5 located in front of cat 49. Referring to figs 5, 16, 17, 18, 21, 22, 24 and 25.. Fig 5 Housing 30 is a light

weight durable material a metal or preferably plastic and is waterproof . The plastic may be clear or a bright color to make it more noticeable housing 30 may have reflective material located on the surface or may be of a prismatic further amplifying the illumination. The housing shape may be in the shape of a ball, rectangle, animal or other shapes for aesthetics or drawing more attention.. It may also be internally illuminated. Means of attachment to the collar is provided as in the prior art.

Illumination 32 or an ultra bright, bright or super bright LED is preferred. Mini strobes with an epoxy lens cover may be used also described in the prior art. Face 31 may be of the color of the housing 30 or may have a reflective surface to amplify the illumination. Fig 7 shows a back view of the device in Fig 5 showing a detachable portion or battery compartment cover 34. Fig 9 is a frontal view of the device in Fig 5 with embodiment's including a reflector 37 led 32 and a switch 36. Switch 36 may be a toggle, button or slider and is water proof by sealing means. Fig. 10 shows reflector 37 with two LEDs 32. These LEDs 32 would flash intermittently or one would be on a timing circuit flashing every second or two and then upon activation of motion sensor means not shown would flash the second LED or both would flash at 5 or 6 flashes per second for 5 seconds. A program chip may also be programmed to have the LEDs flash every second back and forth and then at a predetermined time such as every minute the two LEDs flash intermittently at 5 or 6 flashes per second, lasting only 5 or 6 seconds.

The single flashing alerts wildlife of the cat's presence and the rapid flashing startles the prey to take flight. Fig. 11 shows a reflector 37 with three LEDs. The timing of the flashes is more dramatic and more effective. Several configurations of flashing are possible as previously described. Fig 12 shows 5 LEDs 32 and a reflector 37.

Fig 13 has a plurality of illuminators<sup>32</sup> preferably mini-strobe illuminators encapsulated in an epoxy lens 38. This configuration of illuminators either randomly flash or can be programmed to flash sequentially depicting a figure back and forth or right to left.

This depicting of movement along with the flashing startles wildlife to take flight.

Fig 14 lens means<sup>38</sup> amplifies the intensity of light and directs it or scatters the light.

Fig 15 is a plurality of mini-strobes encased in epoxy similar to the common lapel flashers. The programmed sequential flashing depicts wings flapping. Fig 16 shows a ball 40 illuminator in which the direction of illumination is 360 degrees. Fig 17 shows the device in fig 5 but having LEDs<sup>32</sup> on four outside surfaces of the device.

Fig 18 shows device 30 attached to collar 41 by a slidable means<sup>42</sup> a switch means 36 is provided and a reflector means<sup>37</sup> may be recessed in the housing<sup>43</sup>. Reflector<sup>37</sup> may be flat or convex and may have grooves for intensifying and/or spreading the light source 32. Fig 19 is another means of a removable battery cover<sup>34</sup> and is threadably attached to the housing 43. Fig. 20 is a cross section through device in fig.18 and shows the LED<sup>32</sup> connected to a circuit panel 46 attached to a battery or batteries<sup>44</sup> included in this device is a motion sensor means which upon movement of the device closes a circuit and flashes one or more LEDs intermittently or sequentially. Fig 21 shows a common pet illuminated collar adapted to this method and constructed as per the prior art.

Fig 22 is an illumination device that is slidable to a collar not shown or a harness not shown. The location of this device may be as shown in Fig 2 and Fig. 4.

Fig. 24 and fig. 25 show a simple illumination device commonly used but instead of using small watch batteries the battery compartment not shown in housing 43 has been enlarged to accept larger batteries. Fig. 23 is a cross section through an embodiment of

Fig. 18 this cross section is similar to the cross section Fig. 20 only this has a convex reflector<sup>37</sup> and a lens<sup>38</sup>.

I Claim a Method and device for deterring domestic cat predation

Comprising:

a housing including a power source making an electrical connection between said power source and light emitting device attached to a cat. Said illumination draws the attention of wildlife and helps identify and monitor the cat's location eluding capture.

2. The Device of claim 1 wherein: light emitting device is flashing

3. The device of claim 1 wherein: two or more light devices are flashing intermittently

4. The device of claim 1 wherein: two or more light sources are flashing sequentially.

5. The device of claim 1 wherein: the light source flashes evenly and a motion sensor means closes a circuit and rapidly flashes light device or a plurality of light emitting devices in a timed sequence.

6. The device of claim 1 comprising a switch means to turn the device on and off.

7. The device of claim 1 comprising a lens

8. The device of claim 1 comprising a reflector.

9. The device of claim 1 wherein: the light source flashes evenly and one or more light emitting devices are programmed by circuitry means to flash intermittently or sequentially in a timed sequence.

10. The device of claim 1 wherein: the light emitting devices are mini-strobes attached the circuit panel programmed to flash intermittently or sequentially covered with an epoxy lens means.

11. The device of claim 1 wherein: The light emitting device has a low battery warning system. Audio and or Visual.

## DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a cat with an illuminated device located at the on the lower portion of the collar.

FIG. 2 is a perspective view of a cat with an illuminated device located at the top of a harness.

FIG. 3 is a perspective view of a cat with an illuminated device with means of Illumination about the neck.

FIG. 4 is a perspective view of a cat in a launch stance with an illumination device Located under a collar.

FIG. 5 is a perspective view of an illumination device which is suspended from a Collar.

FIG. 6 is a side view of FIG.5

FIG. 7 is a back view of FIG. 5

FIG. 8 is a frontal view of FIG. 5

FIG. 9 is an embodiment of FIG. 5 with a means of turning the device on and off and a Reflector means

FIG. 10 is an embodiment of the illumination device in FIG. 5 with an added reflector Means and two sources of illumination.

FIG. 11 is an embodiment of the illumination source with a reflector and three sources of illumination.

FIG. 12 is an embodiment of the illumination source showing a reflector and five Sources of illumination.

FIG. 13 is an embodiment of the illumination source showing a reflector and multiple Sources of illumination.

FIG. 14 is a frontal view of a lens means which amplifies and defuses the light in Different directions

FIG. 15 is a frontal view of an illumination screen whereby the multiple illumination Sources are sequentially flashed depicting wings flapping.

FIG. 16 is a perspective view of a ball illumination device.

FIG. 17 is a frontal view of FIG. 5 with sources of illumination on the front face, Sides and bottom.

FIG. 18 is a perspective view of an illumination device which is worn on a collar By means of a slid able attachment.

FIG. 19 is a frontal view of a battery compartment cap

FIG. 20 is a cross sectional view of the device in FIG. 8.

FIG. 21 is a perspective view of a collar with multiple sources of illumination

FIG. 22 is a perspective view of an illumination device which may be worn on the Bottom of a collar or on top of a harness.

FIG. 23 is a cross section of Fig. 18 with a lens added covering the reflector.

FIG. 24 is a side view of an illumination device with an enlarged battery compartment.

FIG. 25 is a frontal view of an illumination device with an enlarged battery compartment And a lens.